EverFocus®

HD CCTV Digital Video IR Bullet Camera

HDCCTV

OPERATION MANUAL

EZH5040

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1. CAUTIONS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Caution

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

⚠ CAUTION

1. IF DC power is used a regulated DC12V 2A power supply is recommended for use with this camera for the best picture and the most stable operation.
   An unregulated power supply can cause damage to the camera.
   If an unregulated power supply is used, product warranty will be Void.
2. It is recommended that the camera is used with a system that has a HDCCTV quality 75 video impedance level.
3. Do not attempt to disassemble the camera to gain access to the internal components. Refer servicing to your dealer.
4. Never face the camera towards the sun or any bright or reflective light, which may cause smear on the picture and possible damage to the CCD.
5. **Do not remove the serial number sticker.**

1. CAUTIONS

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicate that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

This product should not be mixed with other commercial wastes purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
Household users should contact either the retailer where they for disposal.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance

2. FEATURES

•High Resolution

1/3˝ SONY Progressive Color CMOS Sensor,
1280x720 30fps

• Supports Various Digital Video Output

720p 30, 720p 60
720p 25, 720p 50

• Video Outputs

Primary HD-SDI (BNC)
Test/Setup TV Out (Test Point-adapter to BNC Included), NTSC /PAL selectable

• S/N Ratio : Max 50dB

• IP67

• OSD menu for setup and configuration

• Lens

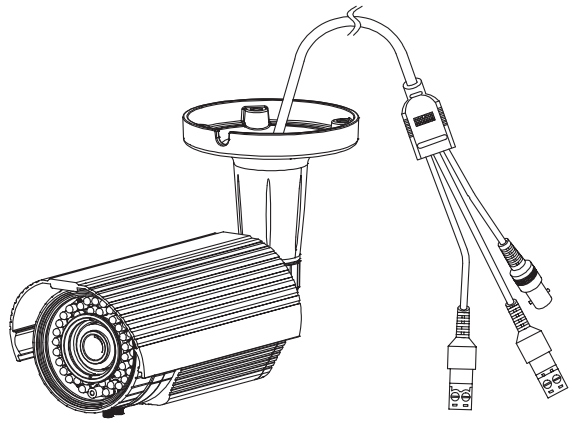
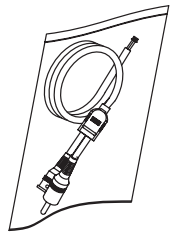
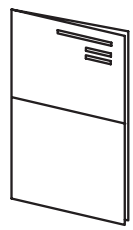
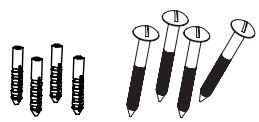
3~9mm Mega-Pixel DC IRIS Varifocal Lens(ICR)
For Flexible Field of View Adjustment and Light Level Control.

• Provides True Day/Night Capability with Motorized IR Cut Filter

• 45 Long Life IR illuminations for 0 Lux viewing performance and range to 45m(150Feet)

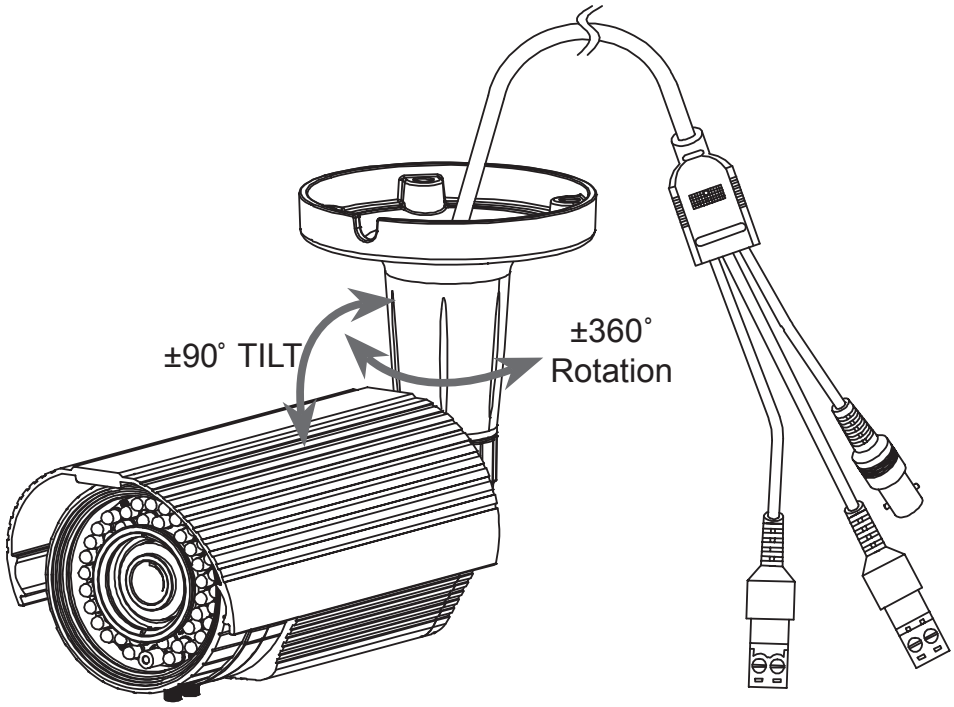
• Power Source : DC 12V / AC24

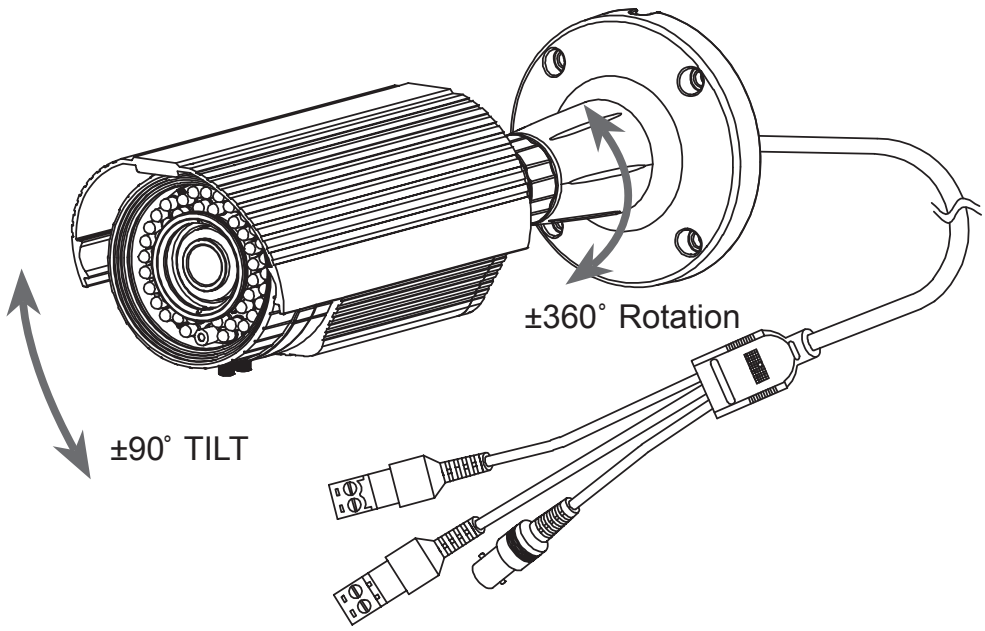
3. EQUIPMENT AND ACCESSORIES

HD CCTV Digital Video Camera	
SERVICE VIDEO OUTPUT TEST CABLE	
L WRENCH	
OPERATION MANUAL	
SCREW - 4ea Plastic anchors - 4ea	

4. INSTALLATION

• ADJUSTING CAMERA MOUNTING POSITION

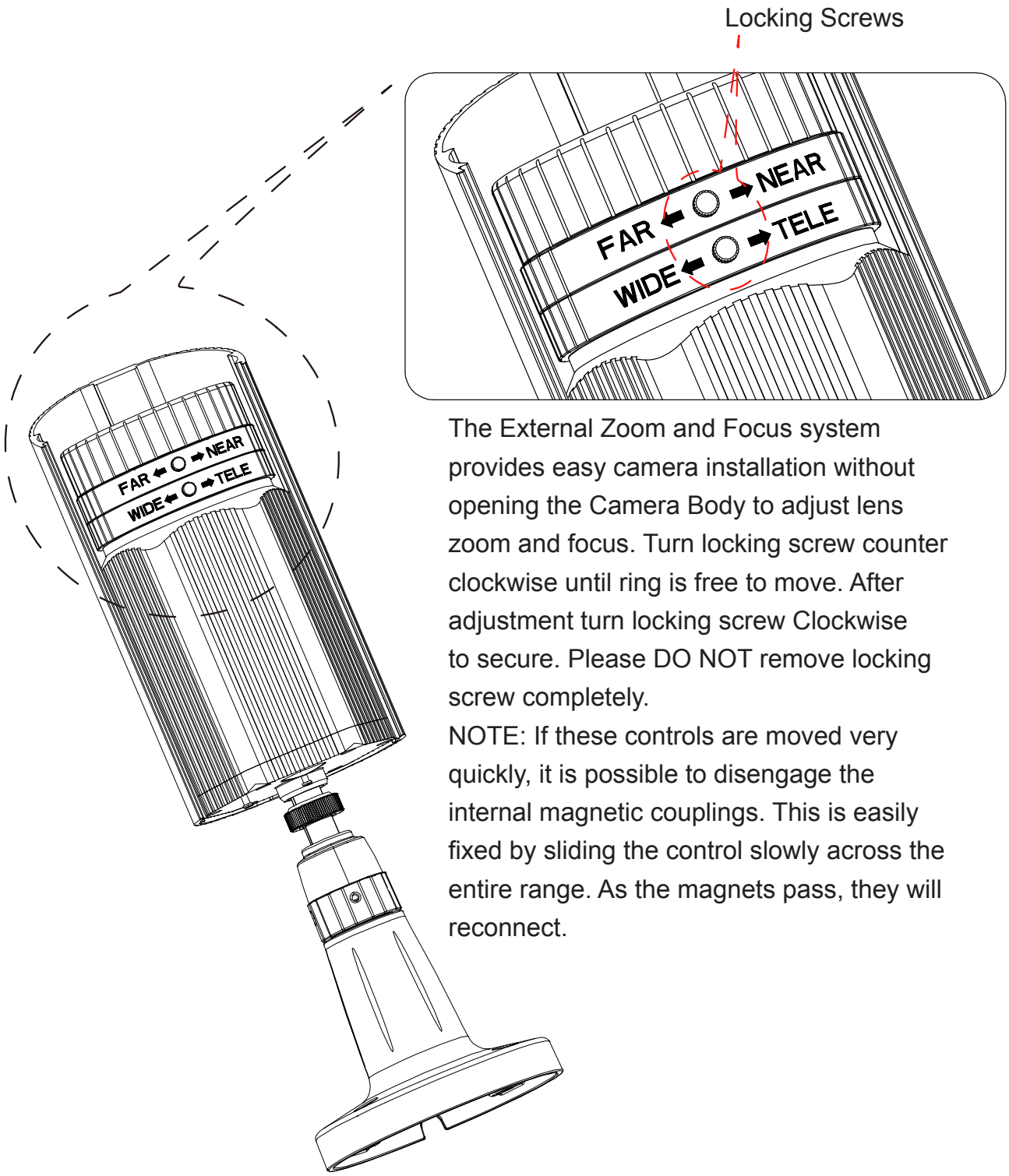




<Cable Concealed Inside Bracket>

4. INSTALLATION

• External Zoom & Focus Adjustment

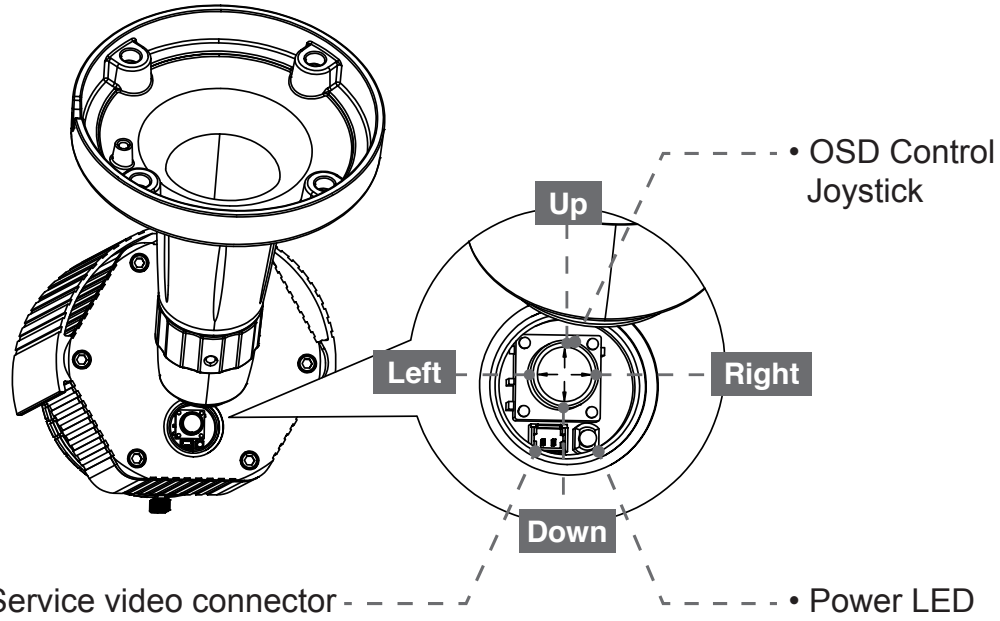


The External Zoom and Focus system provides easy camera installation without opening the Camera Body to adjust lens zoom and focus. Turn locking screw counter clockwise until ring is free to move. After adjustment turn locking screw Clockwise to secure. Please DO NOT remove locking screw completely.

NOTE: If these controls are moved very quickly, it is possible to disengage the internal magnetic couplings. This is easily fixed by sliding the control slowly across the entire range. As the magnets pass, they will reconnect.

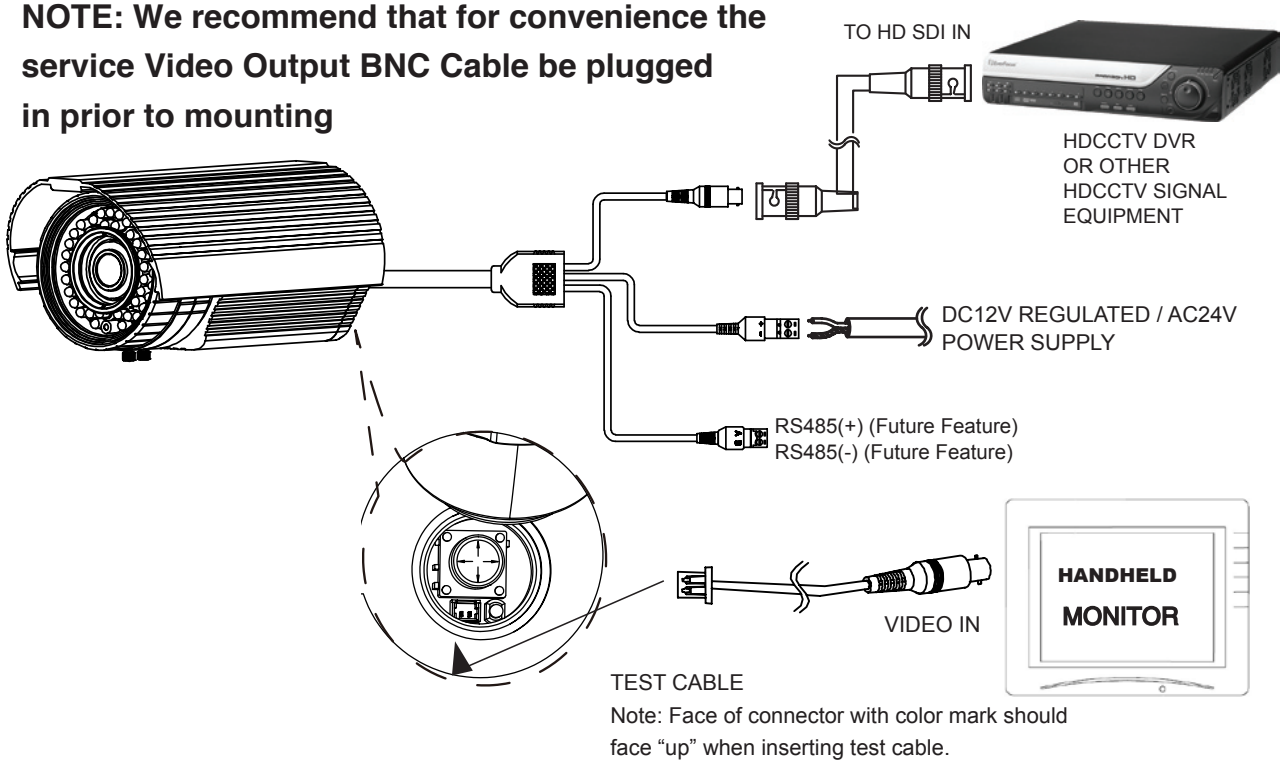
4. INSTALLATION

• Service Video Out & OSD Control



• CONNECTION

NOTE: We recommend that for convenience the service Video Output BNC Cable be plugged in prior to mounting

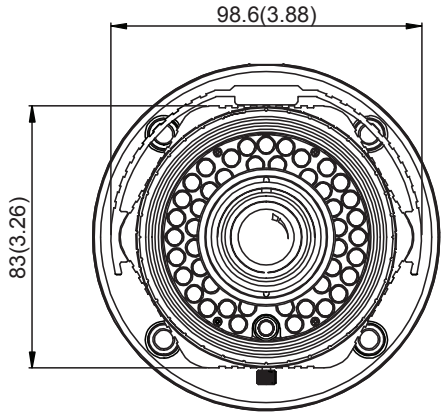


Note: Face of connector with color mark should face “up” when inserting test cable.

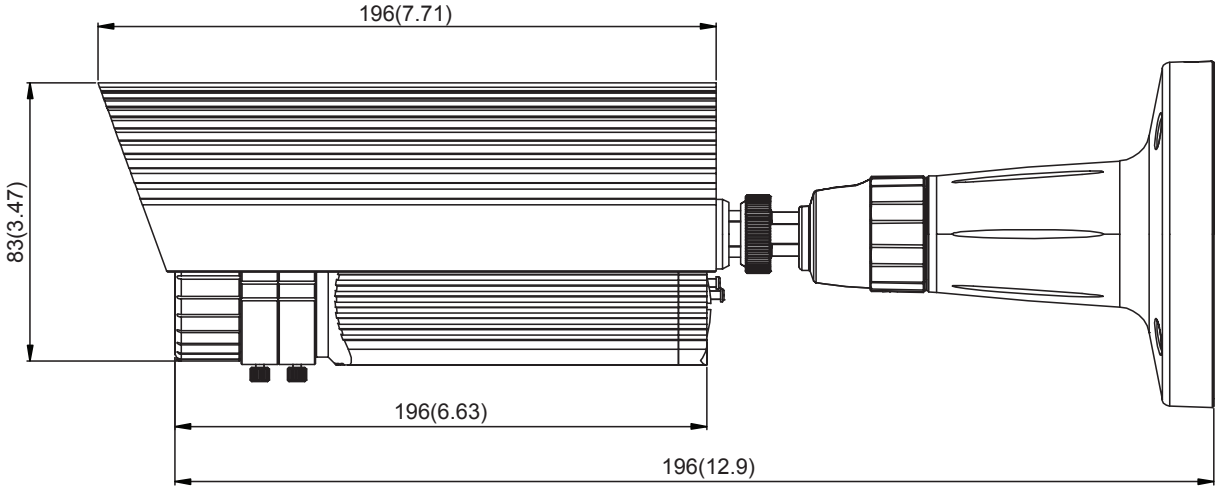
When you install the camera, please seal the ends of cables to protect the camera connections from humidity problems.

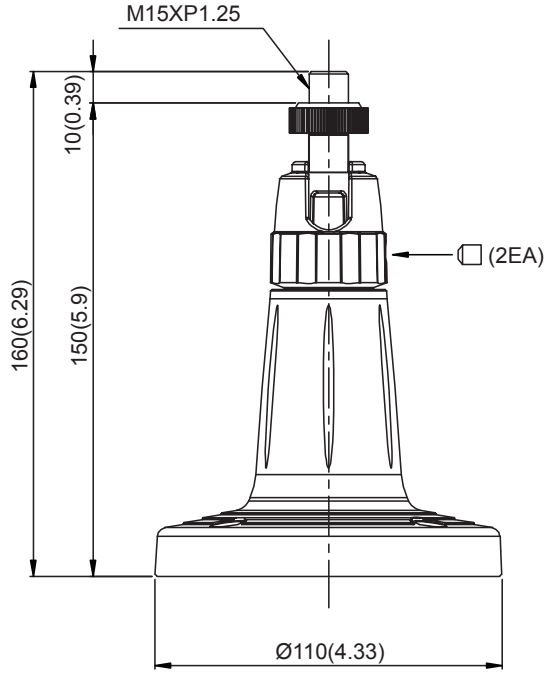
5. DIMENSIONS

Unit: mm(inch)



Body
Dimensions





6. SPECIFICATIONS

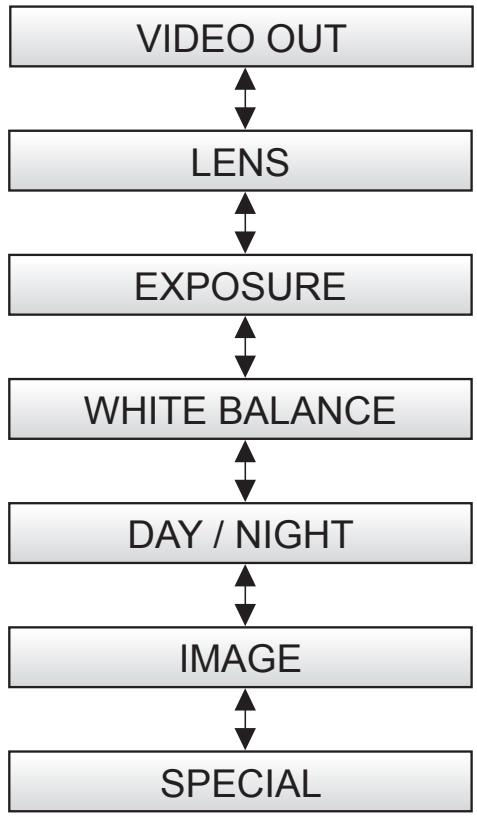
Image Device	1/3” SONY Mega-Pixel Color Progressive CMOS
Effective Pixels	1329 (H) x 1049 (V) 30fps
Unit cell size	3.63um (H) x 3.63um (V)
Video output mode	HDCCTV : 720p 30, 720p 60, 720p 25, 720p 50 TV Out : NTSC / PAL selectable
H.Resolution	More than 800 TV Lines
Minimum illumination	0 Lux
S/N Ratio	Max 50dB
Shutter speed	Auto / Manual selectable
Min. Exposure Time	110.86us (1/9020 sec)
Flickerless	Off / 60Hz(50Hz) selectable
True Day & Night	IR Cut / Pass Filter change
White Balance	ATW / Push / Manual
BLC	On/Off (by OSD)
Lens	3~9mm Mega-Pixel DC IRIS Varifocal Lens(ICR)
OSD Menu	Yes
Power Consumption	DC 12V (±10%) Max. 1.1A AC 24V (±10%) Max. 12W
Environmental	IP67
Weight (g / lb)	2000g / 4.40lb
Conformity	CE, FCC
Temperature/Humidity	Operation : Celsius -10~50(Fahrenheit 14~122) / 20~80% Storage :Celsius -20~70(Fahrenheit -4~158) / 20~95%
IR LED	850nm, 45ea
IR Beam Range	Up to 45M (150 Feet)

Specifications and designs are subject to change without notice for improving the functionality of this product.

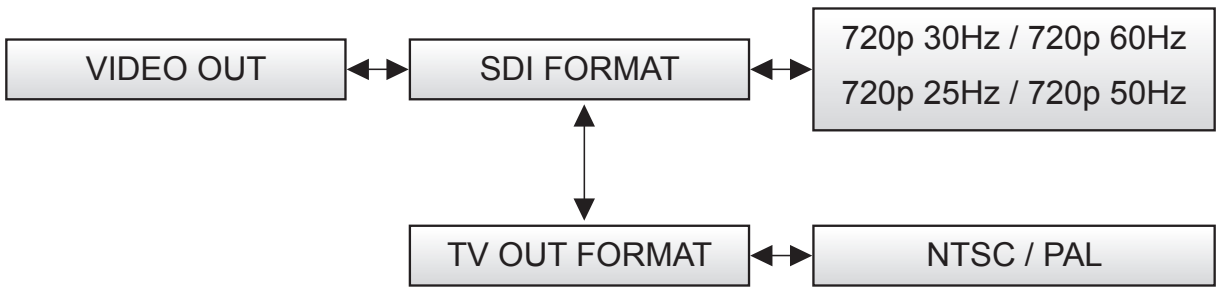
7. OSD MANUAL

• Menu structure

- Main Menu

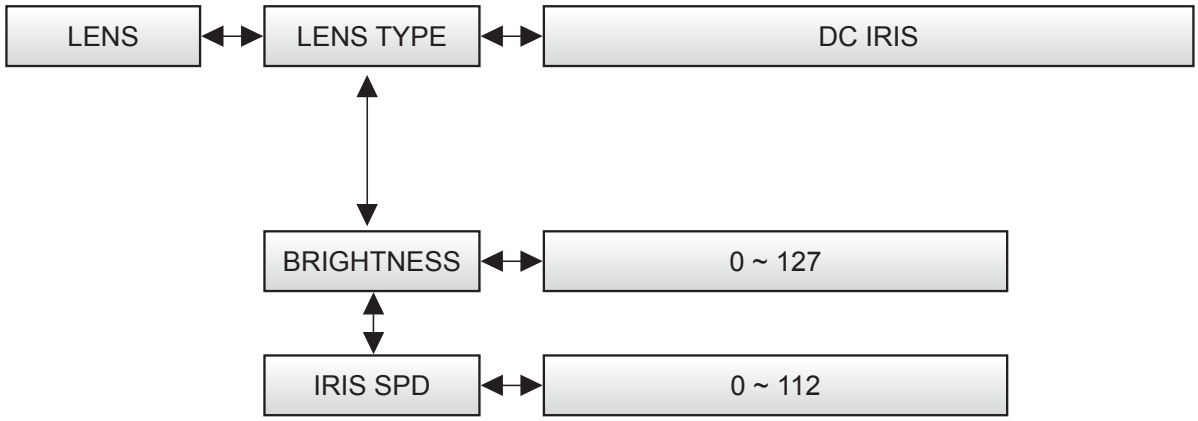


- VIDEO OUT Menu

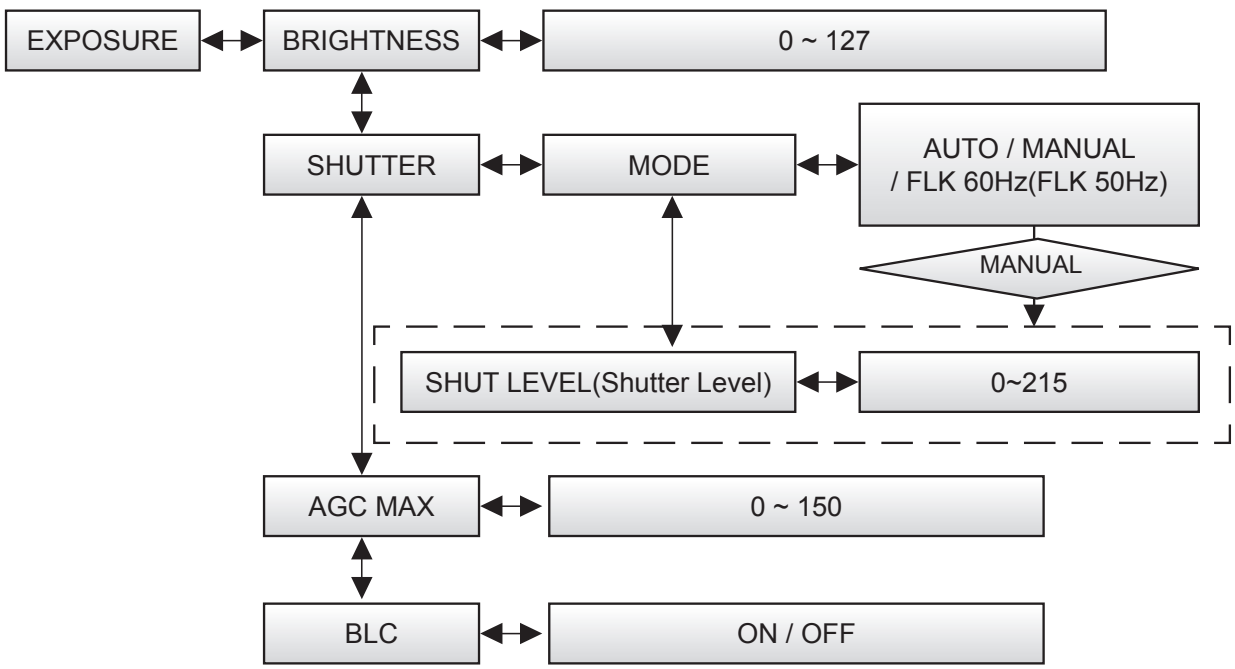


7. OSD MANUAL

- LENS Menu

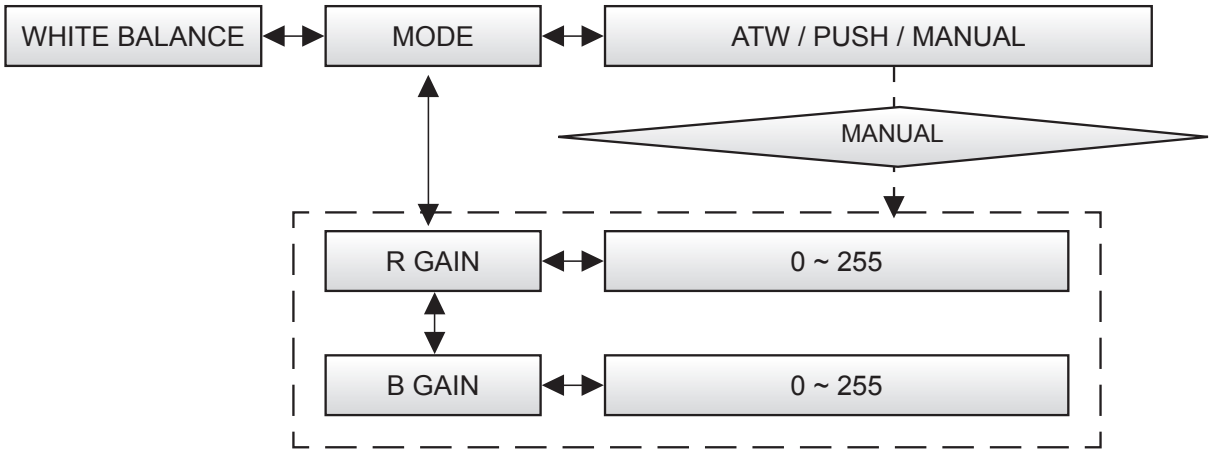


- EXPOSURE Menu

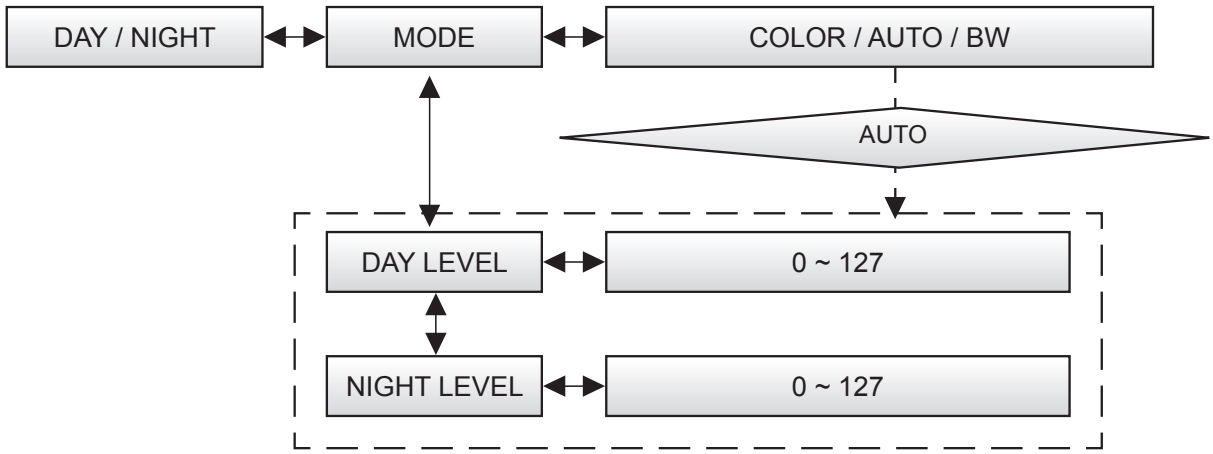


7. OSD MANUAL

- WHITE BALANCE Menu

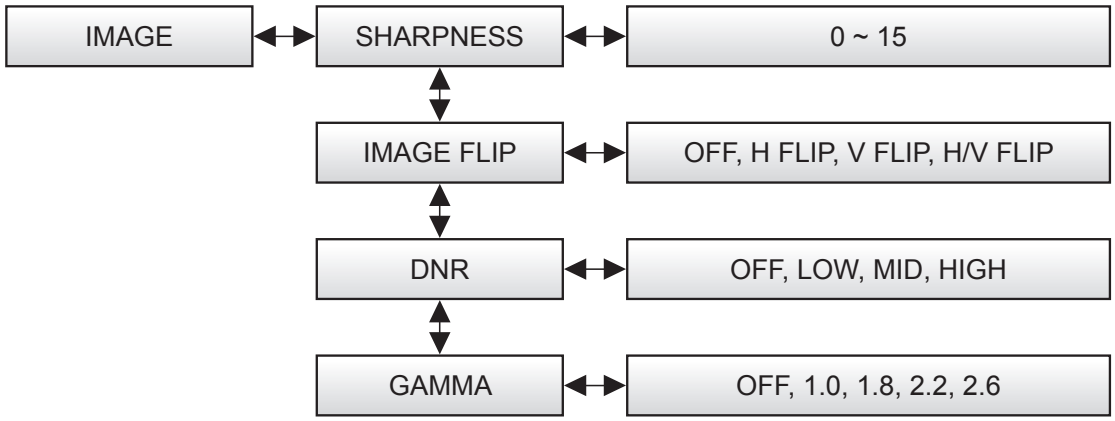


- DAY / NIGHT Menu

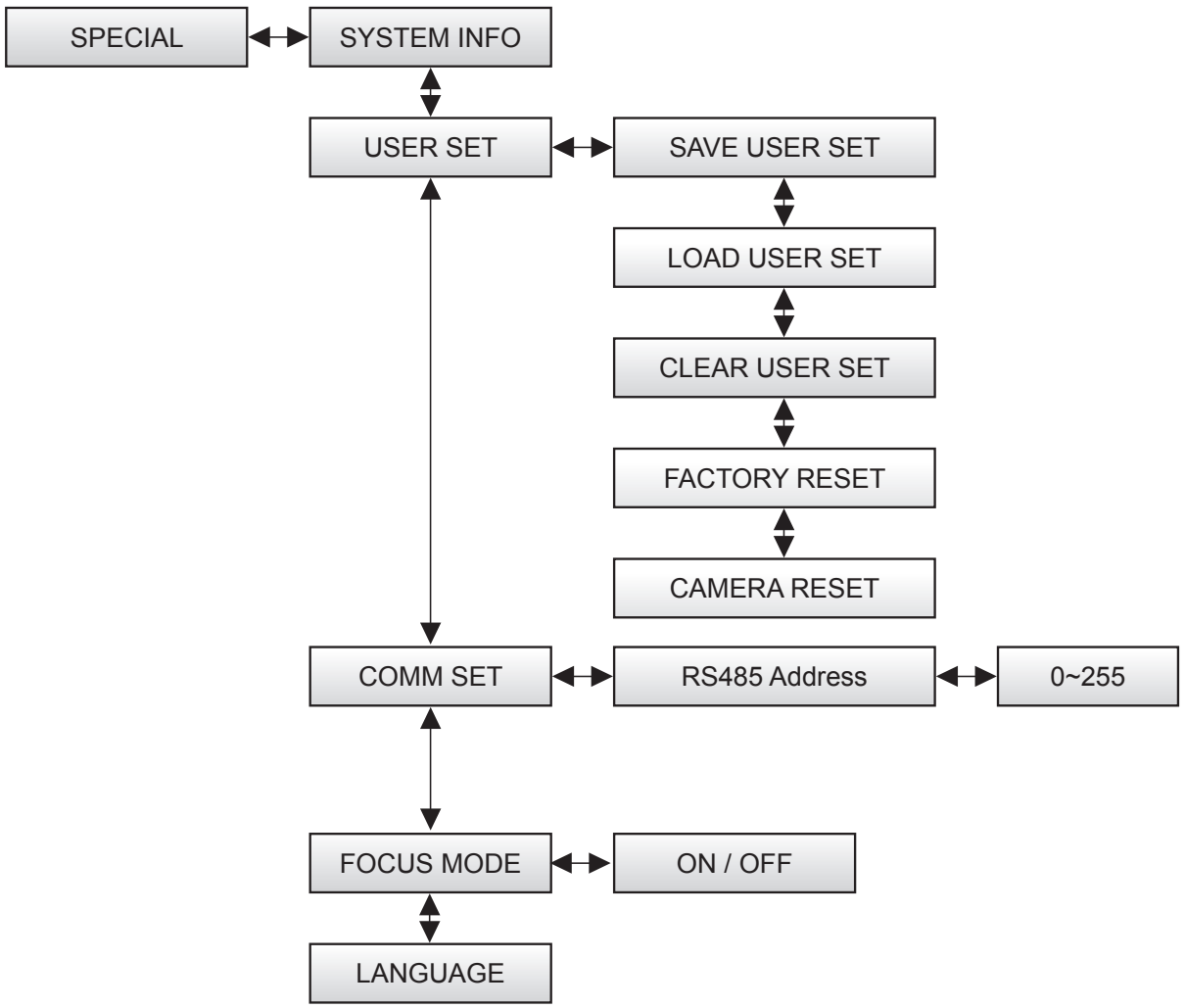


7. OSD MANUAL

- IMAGE Menu



- SPECIAL Menu



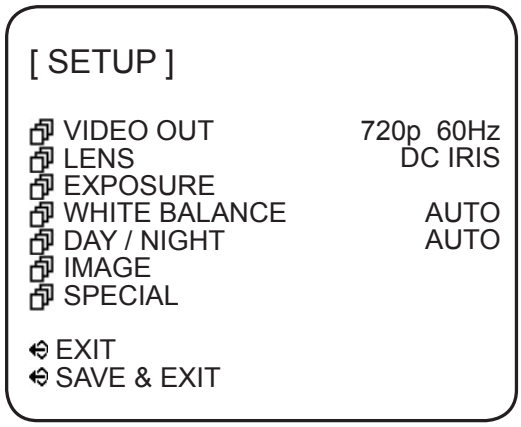
7. OSD MANUAL

• ICONS

- : Value adjustment(use LEFT/RIGHT button).
- : Select Sub Menu(use SET button).
- : Execution command(use SET button).
- : Return to previous menu.
- : Menu OFF.
- : Information.

The [SETUP] menu will show up when you push the SET button

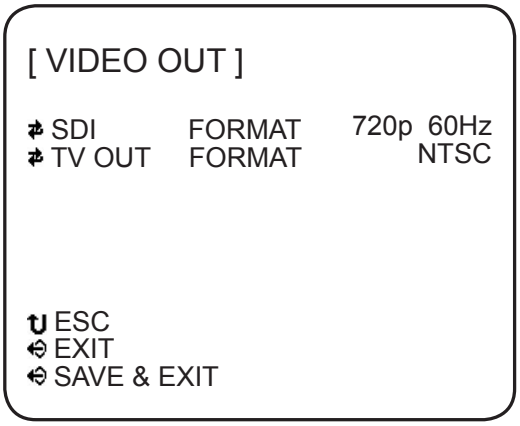
• Main Menu



- **VIDEO OUT :** Select SDI Out format and TV Out format.
- **LENS :** Select the IRIS TYPE and adjust IRIS control value.
- **EXPOSURE :** Adjust Exposure control.
- **WHITE BALANCE :** Adjust White balance control.
- **DAY / NIGHT :** Day / Night control.
- **IMAGE :** Apply Image processing effects.
- **SPECIAL :** System setting, IO setting, USER SET setting
- **EXIT :** Close OSD Menu.
- **SAVE & EXIT :** Save and Close OSD Menu. These settings are loaded and applied automatically when the Camera is power on

7. OSD MANUAL

• Video Out

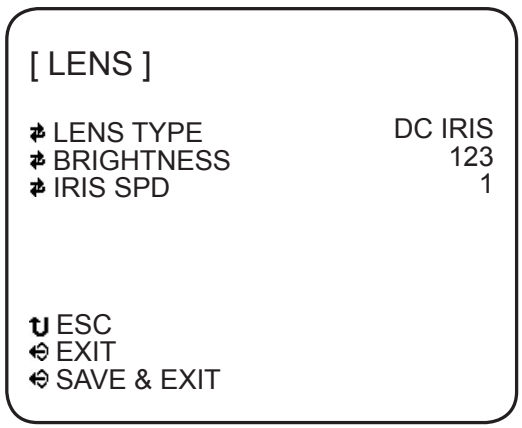


- SDI Format
Select SDI output Formats – 720p 30Hz, 720p 60Hz, 720p 25Hz and 720p 50Hz.

- TV Out Format
Select NTSC / PAL.
Note : NTSC or PAL Video Format can be selected by pressing the RIGHT Button even when the OSD Menu is turned off

- ESC
Back to the previous

• LENS



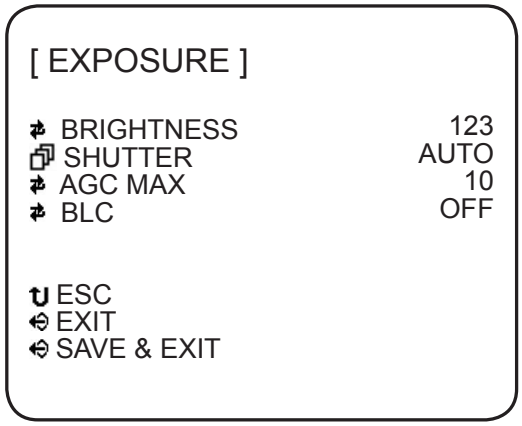
- LENS TYPE
DC IRIS.

- BRIGHTNESS
Using Left / Right button, adjust Brightness value.

- IRIS SPD
Using Left / Right button, adjust Iris speed value.

7. OSD MANUAL

• EXPOSURE



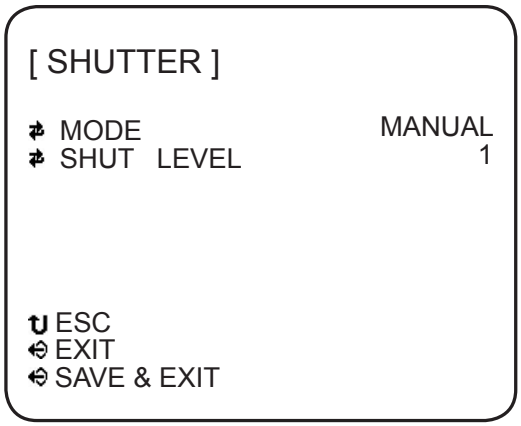
- BRIGHTNESS
Same as the BRIGHTNESS value in LENS Menu. Using Left / Right button, adjust Brightness value.

- SHUTTER
Using Set button, go to the SHUTTER sub menu.

- AGC MAX
Using Left / Right button, adjust AGC Max value.

- BLC
Using Left / Right button, select on/off of Back-Light Compensation Control.

• SHUTTER (Sub Menu)



-- MODE
Using Left / Right button, select Shutter Control modes – AUTO, MANUAL and FLK 60Hz (FLK 50Hz).

AUTO	Auto Exposure mode
MANUAL	Manual Exposure mode
FLK 60Hz (FLK 50Hz)	Flickerless mode (Default)

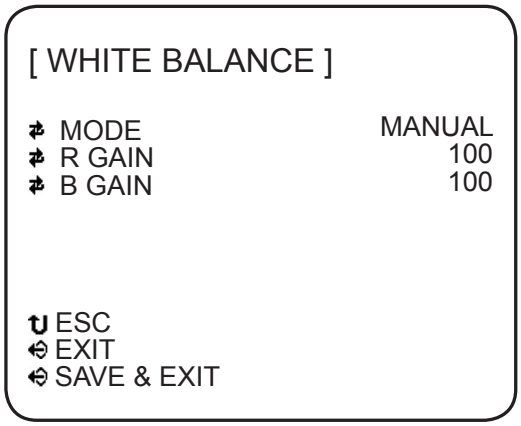
- SHUT LEVEL (Shutter Level)

This menu can be accessed when the Shutter Speed is set to MANUAL.
Use the Left / Right button to adjust the shutter speed control level.
Instead of using the default conventional shutter speed of 1/60,
you may choose other speeds. The speeds corresponding to the value of shutter level are listed below.

Shutter Speed	1/50	1/60	1/100	1/120	1/250	1/500	1/700	1/ 1000	1/ 1600	1/ 2500	1/ 5000	1/ 7000	1/ 10000
Level	178	169	142	135	105	65	46	32	20	12	6	4	3

7. OSD MANUAL

• WHITE BALANCE



- MODE

Using Left / Right button, select White balance modes – ATW, PUSH and MANUAL.

ATW	Auto Trace White Balance mode
PUSH	White Balance Push Lock mode (Auto White Balance Control & Lock)
MANUAL	Manual White Balance mode

- R GAIN

This menu appears on screen when MANUAL is selected.
Using Left / Right button, adjust Red Gain.

-B GAIN

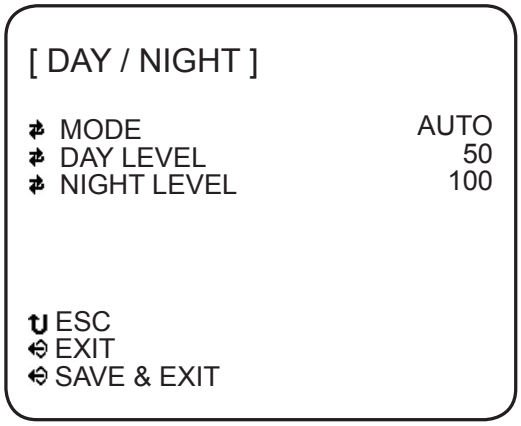
This menu appears on screen when MANUAL is selected.
Using Left / Right button, adjust Blue Gain.

*** NOTE**

R GAIN and B GAIN is correlated with the G GAIN internally, so the R GAIN and B GAIN may increase or decrease with the other color gain.

7. OSD MANUAL

• Day / Night



- MODE

Using Left / Right button, select modes – AUTO, COLOR, and BW.

AUTO	Controlled by Signal from CDS sensor. (Photocell)
COLOR	Fixed Day State. Color Image.
BW	Fixed Night State. BW Image.

- DAY/Night Levels

This menu can be displayed by selecting AUTO or EXT in the MODE Menu.
The Day Level and Night Level thresholds function independently from each other.

- DAY LEVEL

The threshold of change from B&W Mode to Color Mode can be adjusted with values between 0 - 127. A lower value will prevent the camera from switching to Color until the scene becomes brighter.

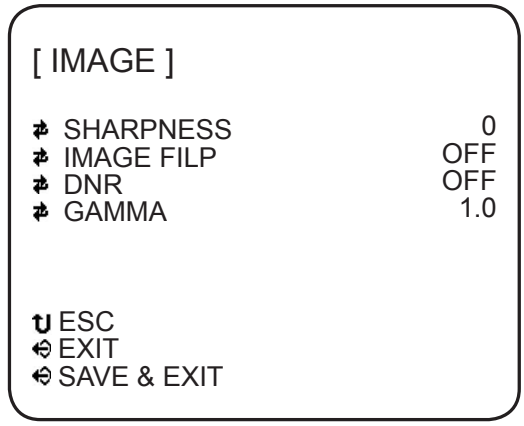
- NIGHT LEVEL

The threshold of change from Color Mode to B&W Mode can be adjusted with values between 0 - 127. A higher value will prevent the camera from switching to B&W until the scene becomes darker.

Note: These is a built in offset between the Day and Night Level to prevent a switching level conflict. The effective Day level can not be set lower than the Night level

7. OSD MANUAL

• IMAGE



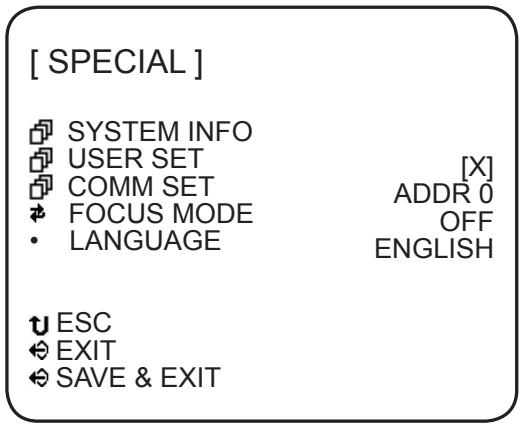
- SHARPNESS: Using Left / Right button, adjust sharpness value.

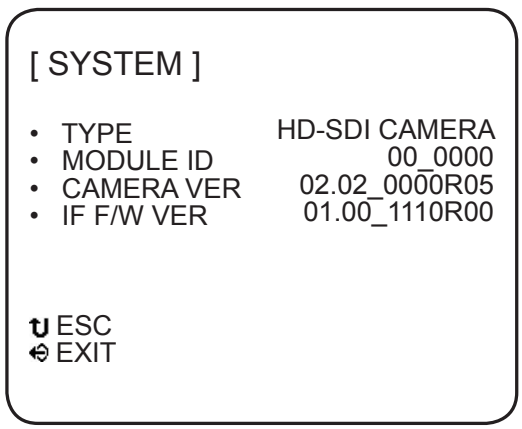
- IMAGE FLIP: Using Left / Right button, select Flip modes – OFF, H FLIP, V FLIP and H/V FLIP.

- DNR: Using Left / Right button, select Digital Noise Reduction Modes - OFF, LOW, MID, HIGH.

- GAMMA: Using Left / Right button, adjust gamma control setting.

• SPECIAL





SYSTEM INFO

Display Camera Version, SDI IF F/W Version & other information.

7. OSD MANUAL

- USER SET

Using Set button, display [USER SET] sub menu.

- FOCUS MODE

In focus mode, the iris becomes fully open, electronic shutter controls the light level, and the TV out screen zooms into the center in order to make focusing easier. When in Focus Mode, the OSD Menu is not displayed. The OSD Menu can be toggled ON and OFF using the Left / Right button.

> TV Out Image

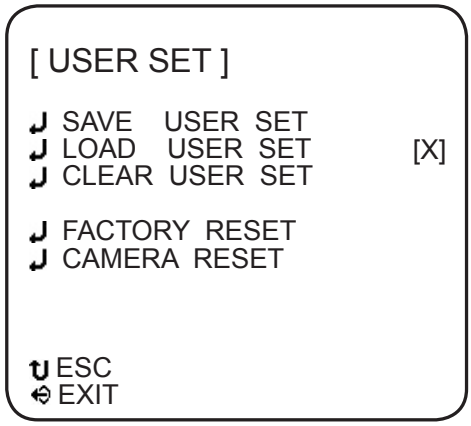
FOCUS MODE OFF

FOCUS MODE ON

- LANGUAGE

Select OSD Language. (Only English is available, currently)

• USER SET (Sub Menu)



- SAVE USER SET

Saves a copy of the current configuration set by the user into a separate memory area. If user set data has been saved, an [O] mark is displayed and if not, an [X] mark is displayed.
User Set settings can NOT be loaded automatically when the camera is powered on. They can only be loaded manually via the "LOAD USER SET" OSD choice. To make the values in a User Set become the configuration loaded when the camera is powered on, first load that User set, then choose "SAVE AND EXIT" in any of the OSD Screens; the current User Set OSD Settings will be written to the power on configuration. These steps effectively copy a User Set to the power on configuration.

- LOAD USER SET

Load the saved user set, and applies to Camera.

- CLEAR USER SET

Clear all saved user set.

- FACTORY RESET

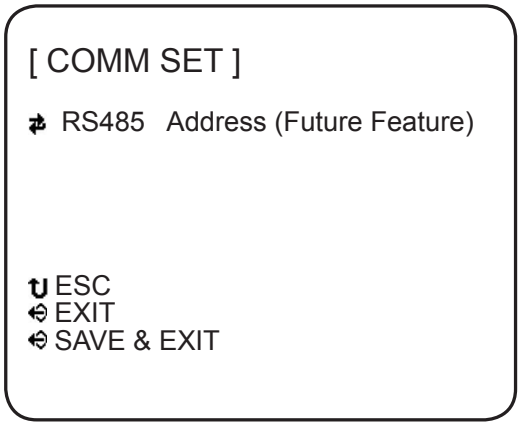
Clear all setting and initialize to factory setting.
Clear user set.

- CAMERA RESET

Reboot the Camera

7. OSD MANUAL

• COMM SET(Sub Menu)



- RS485 Address

Future Feature.

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